

CLAIMS

1. A data back up system for a portable telephone (12) comprising a database center (16) provided outside for backing up data such as telephone numbers and so on set and stored in said portable telephone such as a cellular phone, a personal handy phone, a car telephone, a maritime mobile radiotelephone, a satellite cellular phone machine or the like and a data backup unit (14) including a charging section (20) having a charging connection terminal to be connected to a charging terminal of said portable telephone to charge a battery (18) in said portable telephone, an information transmission interface part (24) to be connected to an external information instrument connection interface part (22) of said portable telephone and a data control section (26) to give a command to said portable telephone through said information transmission interface part to control said data set and stored in said portable telephone, said data control section characterized by giving said command to said portable telephone so that said data stored in said portable telephone are automatically transmitted to said database center while said portable telephone serves as a transmitter in association with a charging operation when said charging section starts to charge said battery in said portable telephone.

2. A data back up system for a portable telephone (12) comprising a database center (16) provided outside for backing up data such as telephone numbers and so on set and stored in said portable telephone such as a cellular phone, a personal handy phone, a car telephone, a maritime mobile radiotelephone, a satellite cellular phone machine or the like and a data backup unit (14) to read from said portable telephone said data set and stored therein and transmit said data to said database center, said data backup unit including a charging section (20) having a charging connection terminal (30) to be connected to a charging terminal (28) of said portable telephone to

charge a battery (18) in said portable telephone through said charging connection terminal, an information transmission interface part (24) to be connected to an external information instrument connection interface part (22) of said portable telephone, a data read section (48) to read from said portable telephone through said information transmission interface part said data set and stored in said portable telephone and an external communication section (50) to communicate at least with said database center, said data read section serving to automatically read from said portable telephone said data set and stored therein in association with a charging operation when said charging section starts to charge said battery in said portable telephone and said external communication section serving to transmit said data read by said data read section from said portable telephone to said database center.

3. A data backup system for a portable telephone according to claim 2 wherein when it is detected that said data read section reads said data set and stored in said portable telephone, said external communication section automatically transmits to said database center said data set and stored in said portable telephone in association with the read operation of said data read section.

4. A data backup system for a portable telephone according to claim 2 or 3 wherein said external communication section transmits to said database center said data stored in said portable telephone by using as a transmitter said portable telephone connected through said information transmission interface to said data backup unit when it is to be charged.

5. A data backup system for a portable telephone according to claim 2 or 3 wherein said external communication section transmits to said database center said data stored in said portable telephone by using cable or radio communication means other than said portable telephone.

6. A data backup system for a portable telephone according to either of claims 2 through 5 wherein said data backup unit further comprises a data storage section (52) to store said data read by said data read section and said external communication section automatically or at an arbitrary time transmits to said database center said data read by said data read section or said data stored by said data storage section in association with the read operation.

7. A data backup system for a portable telephone according to either of claims 2 through 5 wherein said data backup unit further comprises a data storage section (52) to store said data read by said data read section and said database center automatically reads and stores said data stored by said data storage section in association with the connection of said data backup unit to said database center through said external communication section.

8. A data backup system for a portable telephone according to either of claims 1 through 7 wherein said data backup unit or said database center comprises a feedback section (42) to feed back said data stored in said database center to said portable telephone to re-memorize said data in said portable telephone.

9. A data backup system for a portable telephone according to either of claims 1 through 8 wherein said charging connection terminal and said information transmission interface part of said data backup unit are provided in positions corresponding to said charging terminals and said external information instrument connection terminals, respectively and removably attached onto the body of said data backup unit.

10. A data backup system for a portable telephone according to either of claims 2 through 9 wherein said data backup unit can transmit to said database center also said data set and stored in an electrical instrument (58) other than said portable telephone, to which said data backup unit is

connected.

11. A data backup system for a portable telephone according to either of claims 1 through 10 wherein said data, which are to be backed up and set and stored in said portable telephone include at least a control information or a setup function information required for an operation of said portable telephone and a telephone call information such as a telephone number information, an arrival telephone number information, a dispatch telephone number information, a telephone call time or other arbitrary data.

12. A data backup system for a portable telephone according to either of claims 1 through 11 wherein said data backup unit further includes a data transmission limit section (44) to be able to set a limit of transmission of said read and stored data to said database center whereby said data are transmitted and read unless the transmission of said data is limited by said data transmission limit section.

13. A data backup system for a portable telephone according to either of claims 1 through 12 wherein said data backup unit or said database center further comprises a data selection section (46) to arbitrarily select and set any of said data to be transmitted to said database center or to be read from said backup unit or said date to be fed back from said database center.

14. A method of backing up data set and stored in a portable telephone (12) such as a cellular phone, a personal handy phone, a car telephone, a maritime mobile radiotelephone machine, a satellite cellular phone machine or the like, the method comprising the step of giving a command to said portable telephone so that said data set and stored in said portable telephone are automatically transmitted to a database center (16) while said portable telephone serves as a transmitter in association with a charging operation of said portable telephone which is carried out by a data backup unit (14) including a charging section (20) to charge a battery (18) in

said portable telephone whereby said data set and stored in said portable telephone are stored in said database center for storing them.

15. A method of backing up data set and stored in a portable telephone (12) such as a cellular phone, a personal handy phone, a car telephone, a maritime mobile radiotelephone machine, a satellite cellular
5 phone machine or the like, the method comprising the step of automatically reading said data set and stored in said portable telephone and transmitting said read data to a database center (16) by means of a data backup unit (14) including a charging section (20) to charge a battery (18) in said portable
10 telephone in association with a charging operation of said portable telephone which is carried out by said data backup unit whereby said data set and stored in said portable telephone are stored in said database center for storing them.

16. A data backup method for a portable telephone according to claim
15 wherein said data set and stored in said portable telephone are automatically transmitted to said database center in association with a detection of the read operation which is performed by said data backup unit in association with the charging operation of said battery in said portable
20 telephone which is carried out by said charging section of said data backup unit.

17. A data backup method for a portable telephone according to claim
15 or 16 wherein said data stored in said portable telephone are transmitted to said database center with said portable telephone as a transmitter connected to said data backup unit on its charging in accordance with a
25 command from said data backup unit.

18. A data backup method for a portable telephone according to claim
15 or 16 wherein said data stored in said portable telephone are transmitted to said database center by cable or radio communication means other than

said portable telephone and included in said data backup unit.

19. A data backup method for a portable telephone according to either of claims 15 through 18 wherein said data read from said portable telephone by the data backup unit are stored, said data read from the portable
5 telephone or said data stored in said data backup unit are transmitted automatically or at an arbitrary time to said database center in association with the read operation.

20. A data backup method for a portable telephone according to either of claims 15 through 18 wherein said data read from said portable telephone
10 by said data backup unit are stored, said data stored in a data storage section (52) are automatically read and stored by said database center in association with the connection of said data backup unit through an external communication means (50) to said database center.

21. A data backup method for a portable telephone according to either
15 of claims 15 through 20 wherein said data stored in said database center are fed back to said portable telephone by said data backup unit or said database center to re-memorize said data in said portable telephone.

22. A data backup method for a portable telephone according to either of claims 14 through 21 wherein a charging connection terminal (30) and a
20 information transmission interface part (24) of said data backup unit (14) are provided in positions corresponding to a charging terminal (28) and an external information instrument connection terminal (22a) of said portable telephone, respectively and removably attached onto the body of said data backup unit.

23. A data backup method for a portable telephone according to either
25 of claims 15 through 22 wherein said data backup unit can transmit to said database center said data set and stored in an electrical instrument (58) other than said portable telephone, to which said data backup unit is

connected as well.

24. A data backup method for a portable telephone according to either
of claims 14 through 23 wherein said data, which are to be backed up and set
and stored in said portable telephone include at least a control information or
5 a setup function information required for an operation of said portable
telephone and a telephone call information such as a telephone number
information, an arrival telephone number information, a dispatch telephone
number information, a telephone call time or other arbitrary data.

25. A data backup method for a portable telephone according to either
10 of claims 14 through 24 wherein said data backup unit can set a limit of
transmission of said read and stored data to said database center whereby
said data are transmitted and read unless the transmission of said data is
limited by said data transmission limit section.

26. A data backup system for a portable telephone according to either
15 of claims 14 through 25 wherein said data backup unit or said database
center arbitrarily selects and sets any of said data to be transmitted to said
database center or to be read from said backup unit or said data to be fed
back from said database center.

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